

Title (en)
THREE-DIMENSIONAL SURVEYING INSTRUMENT AND THREE-DIMENSIONAL SURVEYING METHOD

Title (de)
INSTRUMENT ZUR DREIDIMENSIONALEN VERMESSUNG UND VERFAHREN ZUR DREIDIMENSIONALEN VERMESSUNG

Title (fr)
INSTRUMENT D'ARPENTAGE TRIDIMENSIONNEL ET PROCÉDÉ DE RELEVÉ TRIDIMENSIONNEL

Publication
EP 3096110 B1 20180912 (EN)

Application
EP 16166551 A 20160422

Priority
JP 2015092816 A 20150430

Abstract (en)
[origin: EP3096110A2] The invention provides a three-dimensional surveying instrument, which comprises a light emitter for emitting a distance measuring light, a light projecting optical unit for irradiating a distance measuring light from the light emitter along a distance measuring optical axis, a light receiving optical unit for receiving a reflection light from an object to be measured, a photodetection element for converting the reflection light as focused at the light receiving optical unit to an electric signal, a scanning unit for scanning a distance measuring light with respect to the object to be measured provided on a frame unit, angle detecting units for detecting an irradiating direction of the distance measuring light as scanned by the scanning unit, a vibration detecting unit for detecting vibration amount of the frame unit, and a control arithmetic unit having a storage unit where a threshold value is stored, wherein the control arithmetic unit controls so that the number of rotations of the scanning unit is gradually increased from low rotation number to the maximum rotation number, stores in the storage unit by associating the number of rotations with vibration amount as detected, compares vibration amount corresponding to the number of rotations as calculated based on measurement conditions with the threshold value, and performs measurement on the object to be measured in a case where it is judged that vibration amount corresponding to the number of rotations as calculated is lower than the threshold value.

IPC 8 full level
G01S 17/42 (2006.01); **G01C 3/02** (2006.01); **G01C 15/00** (2006.01); **G01S 7/481** (2006.01); **G01S 7/497** (2006.01); **G01S 17/88** (2006.01)

CPC (source: EP US)
G01C 3/02 (2013.01 - EP US); **G01C 15/002** (2013.01 - EP US); **G01S 7/497** (2013.01 - EP US); **G01S 17/42** (2013.01 - EP US); **G01S 7/4817** (2013.01 - EP US)

Cited by
EP3447535A1; CN109425296A; CN114485405A; US11520015B2; US11733357B2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3096110 A2 20161123; **EP 3096110 A3 20161228**; **EP 3096110 B1 20180912**; JP 2016211873 A 20161215; JP 6498513 B2 20190410; US 10534075 B2 20200114; US 2016320473 A1 20161103

DOCDB simple family (application)
EP 16166551 A 20160422; JP 2015092816 A 20150430; US 201615097745 A 20160413